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THE ONTARIO UNIVERSITY SYSTEM:
A STATEMENT OF ISSUES



Ontario Council on University Affairs

September, 1978

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Ontario Council on University Affairs

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Introduction

As outlined in the Introduction of Council's Fourth Annual Report,⁽¹⁾ the universities of Ontario have just passed through a truly remarkable period of growth. The contrast between the post-secondary educational system that existed in 1952 and the one that had evolved by 1972 (and still exists today) was described as follows in the first chapter of the Report of the Commission on Post-Secondary Education in Ontario⁽²⁾ :

"During the past two decades, post-secondary education in Ontario has experienced a sweeping transformation. Prior to and immediately after World War II, education beyond high school occupied a modest and respected corner of Ontario's social landscape. It was concentrated mainly in a handful of provincially supported universities, legatees of a proud and substantial, if somewhat narrow, Canadian tradition of scholarship, teaching, and community service. It directly affected only a small segment of the population and cost relatively little public money. The contrast today could scarcely be more striking. The present system of post-secondary education is massive, complex, and diverse. It involves a sizable proportion of Ontario's youth studying in a broad spectrum of institutions with a myriad of functions. It plays a commanding role in society and consumes a substantial part of public expenditures. It is hardly surprising that an activity which earlier attracted slight public attention has, in the last decade and a half, become the object of great public interest, legitimate public scrutiny, and anxious public commentary."

University enrolment tripled in the 1960's and accessibility to higher education became a major government objective. The universities were asked to provide places for all qualified applicants and they did so. Consequently the university was no longer a place for the privileged few. Perhaps equally as important as the increase in full-time enrolment has been the increase in part-time studies. Encouraged in the first instance by the desires of "mature" students, the universities have responded with

(1) Ontario Council on University Affairs Fourth Annual Report March 1, 1977 to February 28, 1978 (Toronto: Ministry of Colleges and Universities, 1978)

(2) The Learning Society, Report of the Commission on Post-Secondary Education in Ontario (Toronto: Ministry of Government Services, 1972)

increasing zeal to the call for education throughout life which was a central theme of the report by COPSE.

Along with the increased educational opportunity offered at the undergraduate level, the growth of the universities provided Canadians, for the first time in many subject areas, with opportunities to study at the graduate level in Canada. By the beginning of the 1970's, Canadian graduate programs were available in most disciplines and some of these ranked with the best in the world.

The funding provided by both the provincial and federal governments for the increased emphasis on graduate work had both quantitative and qualitative effects on university research. The relatively low level of research that characterized our universities 25 years ago blossomed to the point where, in the early 1970's, research became an essential element in the role of the Canadian university.

In summary, a remarkable transformation has occurred in 25 years, a transformation that was possible because of enrolment growth that took place with public support and enthusiasm.

Times are changing, however, and the number of full-time undergraduate students in attendance at university has fallen since 1976-77 and, given longer run demographic forces, may continue to fall until at least 1995-96. As Council pointed out in the Introduction to its Fourth Annual Report, a drop of about 25% from the current enrolment level should not be unexpected. A decline in the order of 25% in the next 20 years is substantial but it must be viewed in the perspective of the extraordinary increase which occurred during the past 20 years. Enrolment levels in 1996 may well only return to the level experienced in 1972.

It has been suggested to Council that part-time enrolment could increase to compensate for the decline in full-time students. Even if part-time enrolment increases, Council notes that the growth would have to be very large to produce this effect.

(Why are the universities so concerned about declining enrolment?)

One reason, of course, is that when enrolment drops there will be less need for the faculty and staff who are currently employed. To view this reason as the sole concern of the universities would be to take an unjustifiably cynical view of the situation. Many people in the universities realize that declining enrolment means that fewer teaching positions will be necessary. What they do not wish to see, however, is the destruction of the gains made during the past several years in other areas of endeavour such as graduate studies, research and community service. The citizens of Ontario will be the long term losers if our universities cease to be capable of maintaining good quality graduate programs, are no longer capable of providing the research strength so vital to Canada, and cannot provide the services to the community which have come to be expected.

The decline in enrolment in itself would present a challenge to the universities because for so many years they have concentrated on accommodating enrolment growth. As well, there is no question that a decline in enrolment must necessitate some loss in income to the universities. Furthermore, this coincides with the stated desire of the Government of Ontario to balance its budget through expenditure restraint. The two events taken together pose serious problems for the universities and for Ontario.

During its 1978 hearings with the universities, Council heard much discussion of the future and, indeed, precipitated some of it. Council was asked by the universities and the provincial organizations (the Council of Ontario Universities, the Ontario Confederation of University Faculty Associations, the Confederation of Ontario University Staff Associations, and the Ontario Federation of Students) to define the problems, to give some guidance as to the consequences of various funding levels and to suggest any structural changes that appeared necessary in order to preserve the best aspects of the system).

In this paper, Council has tried to fulfill these requests by outlining some of the problems and exploring options through which short-term and long-term difficulties might be addressed. There are no easy answers. Nevertheless, solutions must be found to ensure a dynamic university system.

During the spring of 1979, Council will meet with the university community to review the matters raised in this paper which forms part of the Introduction to its Fifth Annual Report.

PART I:

THE GOALS FOR THE UNIVERSITIES

THE GOALS FOR THE UNIVERSITIES

There is little doubt that the universities feel threatened because of declining enrolment and restricted funding. Individually and collectively they have stated that they will be unable to accomplish their task unless the 1978-79 percentage increase in their provincially-controlled revenues is raised in years to come. Obviously, restricted funding over any extended period will have consequences for the universities. For example, as demonstrated in Part II of this paper, the number of academic and non-academic employees may have to be reduced. The loss of several hundred faculty and staff positions may, or may not, be harmful to the quality of education. The effects of funding levels must be viewed in the context of whether or not the universities can satisfactorily carry out their functions and maintain quality. This reasoning leads Council to enunciate what it believes are the implicit goals for the university system in Ontario. Council deliberately uses the word "system" in this context because different universities may fulfill different roles to accomplish the total task of the university sector.

In setting forth the goals, Council is cognizant that some general purposes of the universities must be taken for granted. It is true that the university has traditionally been distinguished by its quest for an understanding of man and his place in the world. It is true also that the university provides a setting in which ideas of all sorts are freely and continuously scrutinized and evaluated. As well, universities certainly enhance society's ability to undertake critical self-evaluation.

However, what Council terms the "instrumental" goals for the universities of Ontario are more specific and, thus, they are the ones that can be most profitably addressed in this paper.

With the above in mind, Council identifies the specific goals for the universities as follows:

- ✓1. To develop a more educated populace.

This goal is realized primarily through the provision of widely-accessible undergraduate programs in Arts and Science. The three-year programs are designed to provide a general education with more emphasis on breadth than depth although a concentration in a particular subject is often required. The function of these programs is to promote the growth of knowledge, understanding and judgment in the individual student and so increase awareness, perception and enlightenment in society at large. The programs are not designed to lead to specific jobs or professions nor should they be. The graduates of these programs should, above all, be capable of the independent thought and analysis required by a complex economy and a free society.

The four-year programs, sometimes called "honours programs", are more specialized in nature and provide the necessary subject background for specialists including future teachers. In fact, the popularity of the honours programs has been closely related to the requirements of secondary school teachers and a large percentage of Arts and Science graduates has traditionally entered the teaching profession.

✓2. To educate and train people for the professions.

The education of people for the professions has been a function of the university for centuries in such subjects as law, theology, and medicine. In recent times the number of professions has increased as has the call upon the universities for the necessary training. The growth in the number of professional schools has been large. As well, schools that have existed for a long time have grown significantly. Students and the public have demanded that professional opportunities be made available to thousands of young people and the universities have responded accordingly. Although the education of people for the professions need not be part of the offerings of every university in Ontario, no doubt should exist about the desire of the public to have the university system respond to real needs in professional fields.

✓3. To provide for study at the highest intellectual level.

Despite the criticism in the recent past that the number of graduate students in Ontario may have been too high and the current concern about the number of graduate programs, no question exists now as to the desirability of graduate offerings. Twenty years ago the number of first-class graduate programs in Ontario and Canada was inadequate and student demand for training at the graduate level was limited. The ramifications of that situation are still being felt. For example, when undergraduate enrolment increased rapidly there were few Canadians qualified to teach in the universities. Because our universities were not extensively involved in graduate work, there was no option but to seek help from the outside, primarily from the United States and

Great Britain.

Although they were late in coming to Ontario, graduate programs now exist which are of international calibre. These programs are the training grounds for the highly qualified individuals, in a variety of private and public sector careers, who are so vital to Canada's future.

4. To conduct basic and applied research including development and evaluation.

Research has always been an important function of a university, and generally speaking university research endeavours fall into four categories: basic, applied, developmental and evaluative.

Canada lags far behind most developed nations in terms of expenditure on research. For example, Holland and Germany spend 2.3% and the USA 2.5% of Gross Domestic Product on research of all kinds while Canada spends 0.9%. With respect to the universities, they are the main suppliers of basic research for the nation and in a very direct way the economic health of Canada depends upon the maintenance of substantial research capacity in the universities. A recent report from the National Science Board of the United States, for example, indicates that in that country basic research is the most frequently cited origin of patented technological advances. During the 1960's, the growth of research capacity in Ontario's universities was substantial. Unfortunately, during the past few years, funding from the federal granting agencies for basic research has been effectively decreased because increases have failed to offset inflation.

In the area of applied research, development and evaluation the university is only a part, albeit an important one, of the network that must exist in industrialized countries. Government and industry have the major roles to play but increasingly the university is becoming an important partner. The universities have the capacity to evaluate suggestions from industry and often the university can be a logical place to conduct development, particularly for firms that are too small to have research establishments of their own. The research role of the university has become increasingly important and the universities are seen as a significant sector in Canada's planned new research and development thrust.

For illustrative purposes the research role has been described in terms of scientific research. However, it is important to remember that scholarship and research in the Humanities and Social Sciences are of equal, if less readily apparent, importance to society. Unless the universities retain their capability to train researchers in all fields, the research goal will not be achieved.

5. To provide service to the community.

While the goal of providing public service has always been important, it is only relatively recently that university involvement in service activities has increased to the current degree. In the sphere of government, universities provide service at the municipal, provincial and national levels through consultative and commissioned activities. In addition, the universities have extended help to the inter-

national community by providing places for students from developing countries and by undertaking major projects to develop the educational facilities in those same countries. Not least of all, as described above, the universities undertake research for the private sector and provide consultation services almost on a daily basis.

Universities also loom large in their local communities. In addition to providing service in the conventional sense, the communities in which the universities are situated have expectations of them which relate to the enrichment of community life. It is well to remember that a university is frequently the provider of facilities, such as reference libraries, that otherwise would not be available. Universities bring a broad range, and are often the chief focus, of cultural activities in their communities, and often rank among the major employers in a region.

With all of the above goals in mind, Council proceeds now to look at the financial problems that may be encountered by the universities in the next few years.

PART II:

FUNDING

FINANCIAL FORECASTS

Since 1970-71, the Ontario university system has found itself under increasing financial stringency. Increases in government operating grants which form the major source of revenue for the university system have lagged behind the combined increases in inflation and enrolment. Tuition fee rates have only been allowed by Government to rise \$200 since 1970-71 and in fact increased only marginally during the sixties. Therefore, any increases in tuition fee revenue, which forms about 15% of total operating revenue, have been attributable primarily to an increased enrolment level. In the Introduction to its Fourth Annual Report Council indicated that all additional students taken into the universities since 1970-71 have been accommodated at approximately 50% of government-controlled income per student for the base year.

Pressures on university finances have been compounded by increases in federal research funds which did not match inflation and the substantial cut-back in provincial capital support. In addition to their effect on the level of university research activity, the constraints on research funds from federal agencies have deprived universities of a major source of funds for equipment purchases. The near-moratorium on provincial capital funding introduced in 1972 has severely restricted the universities' ability to make renovations and alterations to existing space, as well as to make furniture and equipment purchases.

Universities have responded to the financial constraint both by keeping

overall expenditure increases down, and by making cuts in specific areas. Expenditures on non-salary items have received the greatest curtailment. These expenditures, which formed 24.1% of total operating expenditures in 1970-71, had been reduced to 19.9% by 1976-77. Particularly hard hit have been purchases of books and periodicals and technical and scientific equipment. Although conservation programs have greatly reduced energy use, this has been more than offset by increases in energy rates.

In order to permit reasonable salary settlements and to accommodate increased expenditures on fringe benefits, universities have responded by leaving unfilled some faculty and staff positions that became vacant through attrition, by increasing use of faculty term appointments, and by reductions in the number of non-academic staff, particularly in areas such as physical plant. Many universities have considered plans such as early retirement options as a way of obtaining operating flexibility and further salary savings, although little saving from such programs has been realized to date.

Universities have acted in a fiscally responsible way during the 1970's, by avoiding large operating deficits. Those institutions that have experienced deficits in a particular year have been able to move toward balanced budgets in subsequent years. For the most part, it has been possible to finance deficits by cash flow or by using accumulated surpluses. For 1977-78, the system experienced a virtual breakeven position, with a slight surplus of approximately \$3 million. Accumulated surpluses including those appropriated for particular operating purposes total about 3.5% of the annual university operating revenues.

Financial Outlook to 1981-82

The Government's announced policy of balancing the provincial budget by 1980-81⁽¹⁾ has set the tone for grant expectations for all publicly funded bodies for the next three or four years. The Treasurer of Ontario has predicted that increases in "controllable" government expenditure must be kept to 5.8% if the budget is to be balanced. The increase that universities receive will to a great extent depend on whether post-secondary education maintains the same priority within government expenditures.

Council has developed a number of models which provide a framework within which university operating revenues to 1981-82 and their implications can be considered. The institutions included in the analysis are the fifteen provincially-assisted universities, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education and the Ontario College of Art. It should be made clear that these models exclude endowment and sponsored research funds. The basis upon which each of the models is constructed is as follows:

- Model 1 - Provincial grants to universities until 1981-82 form the same percentage of provincial government expenditures (excluding interest on the public debt) as in 1978-79.
- Model 2 - Total university revenue increases at the rate of inflation adjusted downward by 50% of the rate of enrolment decline.
- Model 3 - Provincial grants to universities are limited to 4% increases per annum to 1981-82.

(1) See "Towards a Balanced Budget", Budget Paper C, Ontario Budget 1977

The first of these models assumes that universities will maintain their present level of priority within total government expenditures, if the increasing amounts going to pay interest on the public debt are excluded. This represents a reasonably optimistic level of revenue increases for universities. Model 2 funds inflation adjusted by the 50% discount on enrolment from Council's funding model. It should be noted that the results from this model are very similar to the Treasurer's announced policy of 5.8% increases in "controllable" expenditures if the provincial budget is to be balanced by 1980-81. Model 3 assumes more stringent grant increases for the next three years than the other models, a situation which might arise if, for example, government revenues were to fall below present expectations and the government decided to further restrict spending. The figure of 4% has been chosen arbitrarily.

For these models to generate total university revenue and the components of that revenue, a set of assumptions on various factors is needed: government revenue increases, inflation rate, enrolment changes, tuition fee rates, other university revenue levels and the date by which the provincial budget will be balanced. Values for each of these factors have been chosen for calculating an initial set of alternative university revenues to 1981-82 from these three models. It should be noted that the inflation rate of 6% per annum has been chosen, despite higher current rates, for consistency with the rate used in the 1978 Ontario Budget.

The assumptions as to the initial value of the various factors are as follows:

Assumed government revenue increases ⁽¹⁾	-	1979-80 9.4%
		1980-81 10.1%
		1981-82 10.0%
Inflation rate	-	6.0% per annum
Enrolment change	-	3% decline per annum
Tuition fee rates	-	Remain at present levels
Other university revenues	-	Increase by \$3m. in 1979-80 and thereafter remain constant to 1981-82
Date by which provincial budget is balanced	-	1981-82

Table 1 shows the assumed Ontario Government revenue and expenditures from 1978-79 to 1981-82. Tables 2 to 4 show for the various models the grant increase each year and the percentage increase in operating income of the universities. The assumptions made about inflation, fee rates and other income must be borne in mind when reading the tables. Appendix II-1 shows the sensitivity of the models to changes in the values of the variables.

(1) The government revenue increases for 1979-80 and 1980-81 are obtained from Budget Paper C, Ontario Budget 1978, page 6. The 10% rate of increase for 1981-82 is Council's assumption.

Table 1

ONTARIO GOVERNMENT REVENUE AND EXPENDITURES

1977-78 to 1981-82

	1977-78	1978-79	1979-80	1980-81	1981-82
Revenue ⁽¹⁾					
- \$m	11,987	13,500	14,769	16,261	17,887
- % increase		12.6	9.4	10.1	10.0
Expenditures ⁽²⁾					
- \$m	13,603	14,555	15,666	16,777	17,887
- % increase		7.0	7.6	7.1	6.6
- Deficit (\$m)	-1,616	-1,055	-897	-516	0

- Notes: 1. Revenue data for 1977-78 and 1978-79 are obtained from Ontario Budget 1978, page facing page 1, and include both budgetary revenue and non-budgetary receipts and credits. For subsequent years, the assumed government revenue increases from page 17 of this document are used to obtain total revenue figures.
2. Expenditure data for 1977-78 and 1978-79 are obtained from Ontario Budget 1978, page facing page 1, and include both budgetary expenditures and non-budgetary disbursements and charges. It has been assumed that revenues would equal expenditures in 1981-82. Therefore, the expenditure figures for 1979-80 and 1980-81 are calculated to allow this balance to be achieved evenly over the three-year period from 1978-79 to 1981-82.

/ Table 2MODEL 1

Provincial grants to universities until 1981-82 form the same percentage of provincial government expenditures (excluding interest on the public debt) as in 1978-79.

	<u>1978-79</u> (\$m.)	<u>1979-80</u> (\$m.)	<u>1980-81</u> (\$m.)	<u>1981-82</u> (\$m.)
Grants(% incr.)	738.5	789.4 (6.9)	846.8 (7.3)	907.8 (7.2)
Fees	139.8	137.6	133.5	129.5
Other Revenue	57.8	60.8	60.8	60.8
Total	936.1	987.8	1041.1	1098.1
(% Increase)		(5.5)	(5.4)	(5.5)

Notes:

1. Grants are calculated as 5.5% of the total government expenditures from Table 1 excluding the interest on the public debt.
2. Fee rates are constant throughout, but fee revenues decrease because of enrolment decline. The final \$2 million instalment on visa student fee revenues has been added in 1979-80.
3. Other revenue is assumed to increase by \$3 million in 1979-80 and remain constant in subsequent years.
4. Total revenue is calculated as the sum of the three components.

Table 3MODEL 2

Total university revenue increases at the rate of inflation adjusted downward by 50% of the rate of enrolment decline.

	<u>1978-79</u> (\$.m.)	<u>1979-80</u> (\$.m.)	<u>1980-81</u> (\$.m.)	<u>1981-82</u> (\$.m.)
Grants (% incr.)	738.5	778.9 (5.5)	826.0 (6.0)	874.9 (5.9)
Fees	139.8	137.6	133.5	129.5
Other Revenue	57.8	60.8	60.8	60.8
Total	936.1	977.3	1020.3	1065.2
(% Increase)		(4.4)	(4.4)	(4.4)

Notes:

1. Total revenues are increased by 6% per annum inflation adjusted downward for one-half of the 3% per annum enrolment decline ($1.06 \times .985 = 1.044$).
2. Fee rates are constant throughout, but fee revenues decrease because of enrolment decline. The final \$2 million instalment on visa student fee revenues has been added in 1979-80.
3. Other revenue is assumed to increase by \$3 million in 1979-80 and remain constant in subsequent years.
4. Grants are calculated from total revenue less other revenue and fees.

✓ Table 4MODEL 3

Provincial grants to universities are limited to 4% per annum to 1981-82.

	<u>1978-79</u> <u>(\$m.)</u>	<u>1979-80</u> <u>(\$m.)</u>	<u>1980-81</u> <u>(\$m.)</u>	<u>1981-82</u> <u>(\$m.)</u>
Grants(% incr.)	738.5	768.0 (4.0)	798.7 (4.0)	830.6 (4.0)
Fees	139.8	137.6	133.5	129.5
Other Revenue	<u>57.8</u>	<u>60.8</u>	<u>60.8</u>	<u>60.8</u>
Total	936.1	966.4	993.0	1020.9
(% Increase)		(3.2)	(2.8)	(2.8)

Notes:

1. Grants increase at 4% per annum.
2. Fee rates are constant throughout, but fee revenues decrease because of enrolment decline. The final \$2 million instalment on visa student fee revenues has been added in 1979-80.
3. Other revenue is assumed to increase by \$3 million in 1979-80 and remain constant in subsequent years.
4. Total revenue is calculated as the sum of the three components.

Implications of Alternative Revenue Forecasts

What are the implications of these alternatives for the university system? Regardless of the particular model chosen, all represent financial stringency and will necessitate expenditure restrictions at the universities. Constraint will not apply equally across the system. Some universities will be subjected to less pressure than others because of their program offerings, geographic location, or present financial situation. Even within a university it is not reasonable to expect that restraint can or will apply evenly to all programs. Nevertheless, at a system level, there is a range of options available for effecting expenditure reductions: reduction in the number of teaching faculty, reduction in the number of non-academic staff, further cuts in non-salary expenditures, and providing salary increases which fall below inflation rates. Because non-salary expenditures have borne the primary burden of cost cutting in recent years, it is not reasonable to expect that they alone could experience further reductions.

To understand the financial implications of the various models, each model must be measured in terms of a simple benchmark. The benchmark used in this analysis is the revenue that would be required by the universities to maintain the existing faculty and staff complement, to provide annual inflation and progress-through-the-ranks⁽¹⁾ increases for the salaries and fringe benefits for the faculty and staff complement, and to maintain the existing level of non-salary expenditures adjusted annually for inflation. Table 5 shows the level of system expenditure

(1) Salary increases that are paid in addition to inflation allowances in recognition of career advancement. They can include increases for salary "steps", promotion, and merit.

required each year until 1981-82 under the above assumptions. Council emphasizes once again that the analysis to follow is from the viewpoint of the system. Individual universities would probably differ in the extent to which they follow the pattern of the system.

Table 5

System expenditure levels required to 1981-82 to fund existing salary, fringe benefit and non-salary items plus 6.0% per annum for inflation plus 2.0% per annum on salaries and fringe benefits for progress-through-the-ranks:

	<u>1978-79</u> Estimated (\$m.)	<u>1979-80</u>	<u>1980-81</u>	<u>1981-82</u>
		<u>Projected (\$m.)</u>		
Salaries and fringe benefits	748.8	809.6	875.3	946.4
Non-Salary items	187.3	198.5	210.5	223.1
Total Expenditures	936.1	1008.1	1085.8	1169.5

The assumed expenditure figures of Table 5 may be compared to the revenue figures generated for each of the three models shown in Tables 2 to 4 and a "shortfall" calculated. Using Model 2 only as an example, it is seen in Table 6 that there is a shortfall of \$30.8 million in 1979-80. For illustration of the total effect over the three-year period it is assumed that the university system takes no steps in each year to alleviate the shortfall. Therefore, the shortfalls and their implications shown for 1980-81 and 1981-82 reflect the accumulated shortfall from 1979-80. The accumulated shortfall is \$65.5 million in 1980-81 and \$104.3 million in 1981-82. There are various options available to the university system to meet the shortfall and these are shown in Table 6 for Model 2. Tables for all three models are given in Appendix II-2. To explain Table 6, let us concentrate on the 1981-82 column. The assumed

Table 6

<u>MODEL 2</u>	<u>1979-80</u>	<u>1980-81</u>	<u>1981-82</u>
1. Benchmark Expenditure (\$ m.) (from Table 5)	1008.1	1085.8	1169.5
2. Revenue (\$ m.) (from Table 3)	977.3	1020.3	1065.2
3. Accumulated shortfall (\$ m.) (Benchmark expenditure less revenue)	30.8	65.5	104.3
4. Illustrative options available to university system to match shortfall:			
(a) accumulated % decrease in faculty and staff salary and benefit expenditures if these absorb the entire shortfall, OR	3.8	7.5	11.0
(b) accumulated % decrease in non-salary expenditures if these absorb the entire shortfall, OR	15.5	31.1	46.8
(c) accumulated % decrease in total operating expenditures if all areas of budget absorb the shortfall equally	3.1	6.0	8.9
5. Accumulated number of <u>faculty</u> positions implied by each option if cuts are made from positions:			
(a)	464	915	1342
(b)	0	0	0
(c)	378	732	1086
6. Student-faculty ratios implied by each option:			
(a)	15.2	15.4	15.5
(b)	14.7	14.2	13.8
(c)	15.1	15.1	15.1

expenditure is \$1169.5 million and the revenue is \$1065.2 million, leaving a shortfall of \$104.3 million. Using the options listed under item 4, it would require an 11.0% decrease from the benchmark salary and fringe benefit figure if all of the shortfall figure was taken up by the salary component of the budget. If, as in 4 (b), the shortfall is entirely covered by decreases in the non-salary area, there would have to be a 46.8% reduction. If the shortfall was spread evenly between the two major areas of the budget, the reduction in each category would have to be 8.9%.

Looking now at item 5(a) of Table 6, it may be seen that if all of the shortfall was accommodated by the removal of positions rather than salary reductions, a reduction of 1342 faculty positions would be required by 1981-82 along with a corresponding reduction in total dollars devoted to non-academic staff salaries which would probably involve an even greater number of positions. Obviously if all savings were generated by cuts in the non-salary area, as in (b), then no positions would be lost. If, as in 5(c), it is assumed that reductions are made in all areas of expenditure, 1086 faculty positions must be withdrawn along with, of course, the appropriate number of non-academic staff positions. Item 6 of the table shows the resulting student-faculty ratios for the options (a) to (c).

Some Comments on the Options

As indicated, one approach to reducing expenditures on salaries and benefits is an actual reduction in faculty and staff positions. To some extent this could be achieved through normal attrition and non-renewal of contractual appointments. But attrition could only be a partial response, the limiting factor being the age distribution of faculty. Because most teaching staff are between the ages of 35 and 45, retirements will not provide much relief to the universities for some time. Although attrition rates are difficult to estimate, it is reasonable on the basis of current

figures to estimate that about 250 positions will be lost annually through attrition and non-renewal of contractual appointments over the next three years, fewer than the numbers needed to offset the revenue shortfalls envisaged in the models.

If attrition is at a rate of 250 faculty positions per year until 1981-82, with a corresponding reduction in non-academic positions, Table 6 indicates that the universities would need to remove another 592 faculty positions (1342-750) if salary increases were paid at the rate of 6% plus 2%.

Assume still further that the universities intended to maintain the current teaching service level which is approximated at a student/faculty ratio of 15.1/1. To hold the student/faculty ratio at 15.1/1, 288 positions would have to be retained from the 592. Positions withdrawn then would be 750 by attrition and 304 through other means. The 288 positions that were not withdrawn would have to be financed by reducing salaries. Since 1% of the total faculty salaries budget equates to approximately 100 faculty positions, the accumulated reduction in expected salary levels would be less than 3%. It should be remembered that a 1% increase in tuition fees without a corresponding reduction in government grants would produce approximately \$1.3 million which equates to 33 positions.

It is obvious that there are many combinations of salary reduction and position withdrawals that are available to the universities. Council's purpose in using the above example is simply to show one such combination for one model. How any university responds will depend upon its own priorities, the severity of its financial problems, and, of course, what happens to fee levels. How the system responds will depend upon what

is happening in the country as a whole. If all sectors of society accept wage increases that are below inflationary increases, the universities would be able to provide comparable increases without running the risk of losing their best people. (The best people could be held, of course, by deliberately setting aside a larger portion of the salary budget than at present for selective increases.) There will be a potential trade-off in favour of retaining positions rather than paying larger salaries. If high salaries must be paid and the global funds are limited the universities will have little option but to reduce the number of positions.

In all of this discussion, it is important to remember that the figures used by Council were derived from Model 2. Obviously if the actual situation more closely parallels Model 1, the position will not be as serious. On the other hand, should Model 3 be closer to actual than the others, the seriousness of the situation for the universities will be exacerbated.

Financial Outlook to 1990

The financial outlook for the university system after 1981-82 is a matter for even more speculation than the outlook until 1982. Should the Government of Ontario succeed in balancing its budget there will subsequently be more flexibility on the expenditure side. Whether increased government expenditure would provide relief for the university system, however, is not certain. Enrolment in the whole post-secondary sector is expected to decrease after 1981-82. On the other hand, the anticipated rate of enrolment decline could be moderated through increased part-time student participation. It is also possible that an improved economy could produce a manpower shortage in 6 - 8 years' time and university graduates would be in greater demand.

Most of the above discussion has centred around cost-cutting as the means by which universities can maintain financial viability. Steps can also be taken to increase revenue. The search for other revenue sources should receive particular attention by the universities. What do institutions have to do to increase corporate donations? In large measure this depends on the corporate perception of universities. As well, it may involve exploration of ways in which universities can enter into activities with the private sector, such as the increased provision by universities of research and development services to business firms. Grants from government are not offset by donations from the private sector. Indeed, more private giving would be a good thing in itself because universities have become disproportionately dependent on public support.

Council has no crystal ball that allows it to predict the future but in general the future appears to be one in which the universities will have to reduce operating expenditures and explore alternative sources of funding.

THE ALLOCATION OF OPERATING GRANTS AMONG INSTITUTIONS

How severely the individual institutions are affected by global financial constraints will depend, in part, upon the mechanism used to allocate funds among them. Any number of options is possible and most have been discussed repeatedly and at considerable length in recent years.

Council is on record as stipulating that any allocative mechanism to be used in the Ontario university sector should provide: "(1) funding stability by preventing extreme fluctuations in institutional income, (2) funding predictability to assist institutions in their planning efforts, (3) equitable allocations among institutions, (4) accountability to the public by linking funds to some quantifiable factor, and finally a method that would be (5) simple to use, understandable and practical to implement" (Advisory Memorandum 77-VII). In its ongoing review of potential allocative mechanisms for undergraduate and graduate programs, Council has considered a great variety of options in light of these criteria. It believes that the formulae used for undergraduate allocations and those recommended for the graduate sector do indeed satisfy these five requirements far better than do any of the other mechanisms put forward from time to time.

Council is firmly of the opinion that yet another round of talks on allocative mechanisms would be fruitless unless the institutions or the Government can make a case for changing the criteria which Council has enunciated. It must be borne in mind that during the Spring 1978 hearings the majority of institutions concurred in principle with the formulae for allocating graduate support proposed in Advisory Memorandum 77-VII. These strongly resemble the formula currently in place for undergraduate allocations.

Nonetheless, Council has reason to suspect that the current undergraduate allocative mechanism is not fully understood in many quarters. The following, therefore, describes precisely how this formula works and how it serves the principles of stability, predictability, equity, and public accountability.

Mechanism for Allocating Funds with respect to Undergraduate Programs

The allocative mechanism currently used operates as follows.

(1) For each institution an Undergraduate Formula Funding Base is calculated by taking a three-year average of weighted undergraduate student enrolment (Basic Income Units-BIU's) in the years 1974-75, 1975-76, and 1976-77. This base figure is fixed. (2) Each year a second average of weighted enrolment (BIU's) is calculated using actual enrolments in the preceding three years, a three-year moving average. These two average enrolment figures are then combined in the following way to generate the number of basic income units to be used for funding an institution's undergraduate programs: $(1) + \frac{1}{2} [(2) - (1)]$. That is, the number of BIU's in the Undergraduate Funding Base plus 50% of the difference between the more recent moving three-year average of BIU's (2) and the BIU's in the Base (1).

This means that institutions which experience undergraduate enrolment increases post-1976/77 will, after 3 years, receive a maximum of 50% of the operating revenue that would otherwise be expected were funding allocated on a direct per capita basis. Conversely, institutions which experience undergraduate enrolment declines will lose a maximum of only 50% of the funding associated with the lost enrolment. Herein lies the stability feature of this allocative mechanism for, in the extreme case, an institution which had no enrolment whatsoever at the undergraduate level beginning in 1977-78 would receive funding on the

basis of 50% of its average enrolment in 1974-75, 1975-76 and 1976-77.

Enrolment averaging, the fixed base, and slip-year enrolment counting combine to serve the principle of predictability. Again taking the extreme case, if an institution unexpectedly lost all undergraduate enrolment in a given year, it would know immediately that under this allocative mechanism its funding BIU's in the following year would decrease by one-sixth.

The undergraduate formula provides a degree of equity among the institutions because a relationship continues to exist between the numbers of students enrolling and the level of funding. This same relationship between enrolment and funding is the way in which the criterion of public accountability is served.)

Mechanism for Allocating Funds with respect to Graduate Programs

In Advisory Memorandum 77-VII Council outlined allocative mechanisms which it favoured for the graduate sector. These were generally modelled along the lines of the undergraduate formula, with the exception that a higher degree of stability through reduced enrolment sensitivity would be provided in the allocations with respect to doctoral programs. As indicated earlier, these proposals were by and large endorsed by the university community.

Council can only reiterate that it does not wish to entertain another round of talks concerning allocative mechanisms unless new evidence is presented to show clearly that the criteria governing selection of a funding mechanism should be altered.

PART III:

ACADEMIC FUNCTIONS OF THE UNIVERSITIES

UNDERGRADUATE INSTRUCTION✓ The Growth and Decline of Enrolment

As outlined in the Introduction to Council's Fourth Annual Report, the universities of Ontario have just passed through a remarkable period of growth in which accessibility was a major government objective. The universities were asked to provide places for all qualified applicants and they did so. Since 1960 the growth of the 18-24 age group has been approximately 108%. In addition to the increase in the number of young people of the usual age to attend university, the participation rate also increased. Full-time undergraduate university attendance expressed as a percentage of the 18-24 age group increased from 5.4% in 1960 to a high of 13% in 1975-76.

From all appearances the number of full-time undergraduate students in attendance at Ontario universities has fallen since 1976-77 and may continue to fall until at least 1995-96. Although the number of people in the 18-24 age group will continue to increase until 1982-83, the participation rate has already declined from the 13% achieved in 1975-76 to an estimated 11.5% in 1978-79. This decline in the participation rate is a matter of concern in certain quarters. Indeed, Council heard arguments during the Spring of 1978 that steps should be taken to increase attendance at universities to meet Canada's long run need for increasing numbers of people educated at the university level. On the other hand, Council is aware of opinions to the effect that university education has been over-sold in recent years and that steps should be taken to make other forms of education and training more attractive.

The fact is that university education in Ontario is already widely accessible to individuals who can meet university admission requirements. Although a significant proportion of young men and women have the opportunity and qualifications to attend university, many are choosing not to do so. It has also been suggested that young people from some socio-economic backgrounds elect not to enrol in secondary school programs that would enable them to enter university. To the extent that this is deemed an example of denial of accessibility, it is one that should be addressed at the primary and secondary school levels. As long as financial assistance is available to university students regardless of socio-economic background, the decision to attend must clearly be a matter of individual choice.

The current position on part-time studies is that enrolment is declining in this area also. It is not easy to predict the future in this sector. During the past two decades the attention of the university system has, of necessity, been directed primarily to providing places for full-time students. As the universities shift their focus to providing opportunities for potential part-time students, and as the number of people in the age group 25-35 grows, (a large percentage of part-time students is in this age bracket), the enrolment in part-time studies of all kinds could increase. However, it would take large percentage increases to offset the declines expected in full-time enrolment. For example, to offset a decline of one full-time student would normally require five additional part-time course registrations.

The Tables in Appendix III-1 present some general data on undergraduate enrolment patterns. An examination of the decline in undergraduate

enrolment that has already occurred in the system brings to light a number of interesting facts: the undergraduate enrolment decline is concentrated primarily in the Arts and Sciences; the decline experienced in 1977-78 occurred primarily in the freshman year; undergraduate enrolment declines were not distributed evenly among the universities; and, the enrolment decline experienced in university undergraduate programs was not duplicated at Ryerson, the Ontario College of Art or in the Colleges of Applied Arts and Technology. First year applications for entry in Fall 1978, based on the latest available information, indicate that in general the same pattern of enrolment change may occur in 1978-79.

As a general principle Council believes that the universities, individually and collectively, must be responsive to changes in the level of student demand for undergraduate education. A diminishing supply of students will undoubtedly have an impact on the institutions within Council's purview. Accordingly, Council now turns its attention to the following specific areas of undergraduate instruction: Professional Programs, Polytechnic Instruction, Part-time Studies, and Arts and Science.

✓ Undergraduate Professional Programs

Students are usually admitted into undergraduate professional programs in their freshman year (like Engineering) or at some point in their undergraduate studies (like Medicine and Law). Many of the professional programs have enrolment ceilings and most enjoy a student demand which exceeds their capacity (e.g. 6 applicants for each medical school admission).

There is one notable exception to the rule of high demand for professional programs, namely, Bachelor of Education programs. While this may be a source of considerable concern to the Faculties of Education, Council, from a public interest perspective, finds this development

encouraging. The market for new teachers in Ontario has decreased markedly with the declines in the number of elementary and secondary students. Evidence suggests that there may be a general winding down in these educational sectors, and Council thus takes reassurance from the indications that student demand for the B.Ed. appears to be taking cognizance of the employment situation. Indeed, current developments in Education programs suggest that the "marketplace" approach can and does work for professional undergraduate programs, although there may be time lags before student demand fully reflects the availability of jobs for graduates.

Although Education has been cited as an example of a professional field in which student demand has begun to reflect changes in the marketplace, it must be remembered that demand for teachers is relatively easy to predict given that the number of teachers needed is a function of demographic trends. In most other professional areas, however, it is much more difficult to forecast society's need for graduates. This factor alone makes it imperative that a very close watch be kept on student demand and the need for professional graduates.

Without begging questions about the validity and accuracy of manpower forecasting, Council has begun to wonder whether the enrolment levels in professional programs other than Education are appropriate. Is there any way to assess whether enough graduates are being produced in the various professional fields? In which professional areas, if any, are too many graduates entering the work force each year, and vice versa? Are there likely to be shifts into new "professional" areas? Council would be particularly interested in hearing from the universities the extent to which the professions heavily oriented toward public sector employment (e.g. Nursing, Library Science, Social Work) can expect declines in

demand? Should fewer graduates in these fields be entering the marketplace given general expectations of declines in public sector hirings?

Council poses these questions with three thoughts in mind. First, if undergraduate professional programs maintain current enrolment levels, there may be a gradual change in the character of some institutions as Arts and Science enrolment declines. Second, in those professional areas where enrolment controls are not exercised by agencies outside the system, universities might increase professional enrolments as an offset against enrolment declines in other programs. Third, if there are indications that the universities are producing an over-supply of professionals in some fields, attention should be given to reducing the number of professional graduates.

Undergraduate professional programs are expensive to operate. The applied training received by students in professional programs naturally tends to foster the expectation that graduates from these programs will find employment in their fields. It is, therefore, in the public interest for Council to expect COU and the individual institutions to monitor developments in this area as they affect the university, the professions and the student.

Polytechnic Instruction

Polytechnic programs are treated here as a separate category. Ryerson Polytechnical Institute is the only centre for polytechnic degree education in Ontario and, as well, offers programs leading to certificates and diplomas in applied arts, technology, and business. Demand for admission to Ryerson continues to exceed the number of annual admissions.

There is ongoing discussion as to the potential desirability of expanding polytechnical education in Ontario. From the viewpoint of the university system it might be desirable to encourage some universities with neighbouring Colleges of Applied Arts and Technology to develop and offer joint programs leading to applied bachelor's degrees. On the surface this approach might: (1) allow universities with sharply decreased Arts and Science enrolment to use excess physical capacity for polytechnic offerings; (2) use existing university faculty, who might otherwise be considered redundant, to offer the arts and science components of the polytechnic education; and, (3) improve accessibility to polytechnic programs. It should be noted here, however, that while arts and science courses taught at Ryerson may appear to be the same as those taught at universities, in actual fact there is a fundamental difference in approach. In order to have university faculty teach arts and science courses within a polytechnic framework, there would need to be significant curricular revamping and a true commitment to the polytechnic concept.

As desirable as a move to applied arts and technology degree offerings may seem, Council urges the exercise of caution and careful planning before any polytechnic expansion is undertaken. At present the ratio of qualified applicants to freshman enrolment at Ryerson averages about 1.9:1. Care must be taken not to open so many other programs that Ryerson's viability is threatened, nor to infringe upon the technical program areas which are in the domain of the Colleges of Applied Arts and Technology. Even more consideration must be given to the students entering polytechnic programs. The need for polytechnic programs must be measured not only in terms of student demand, but also in terms of the job opportunities available for students completing these programs. New programs should only be started in those areas designated by Ryerson and its advisory councils (drawn from the business community) as having both excessive student demand and ample employment opportunities for additional graduates. For its part,

Council would not approve funding for any new polytechnical programs without consulting Ryerson.

In the final analysis it may well be found that society's need for polytechnic graduates may best be served by Ryerson exclusively. Indeed, the question may be asked as to whether it is appropriate to encourage or allow the expansion of a third stream of post-secondary education in Ontario of the kind described above when the entire post-secondary system will face the effects of a demographic downturn expected to begin in the early-1980's. However, if it is the conclusion of all concerned, and especially Ryerson, that there now exists a great need to expand polytechnic programs and accessibility in Ontario, consideration must be given as to how this expansion should be carried out. Should all polytechnic expansion be left up to Ryerson, or should other institutions be involved?

If it can be proven that polytechnic expansion is needed in Ontario, it will also be important to determine where it should occur. Many believe that the successful polytechnic is a strictly urban phenomenon, and that a large metropolitan area is the only place in which the proper blend of student demand, student employment and external business community input into the actual programming, can be found. If the expansion is to take place in a non-metropolitan area, would Lakehead beckon as the institution most suited to offer polytechnic programs in addition to its regular university programs, given the diploma courses it already offers?

Undergraduate Part-Time Studies

Now, as in the past, Council does not attempt to forecast likely enrolment trends in the area of part-time studies. Dr. J. Porter of Carleton University is currently studying part-time students and his

findings may well shed some light on the reasons for, and patterns of, part-time attendance. In any case, it is important to remember that universities face rugged competition in the part-time arena - from Colleges of Applied Arts and Technology, correspondence courses, interest courses offered in evenings by Boards of Education, and the like. Hence, it may be faulty to assume that universities will be able to absorb, through growth in part-time enrolment, the excess capacity which will result from declining full-time enrolment.

Undergraduate Arts and Science

It has been suggested that as the pool of eligible potential undergraduate students shrinks, universities will be motivated by the so-called "per student" funding formula (although greatly modified by averaging and discounting enrolment change) to compete among themselves for students. Competition could take many forms: stepped-up recruitment activities; more flexible admission standards; financial incentives to entice students to enrol (like reduced or free tuition, more generous scholarships, etc.); or, even mounting of popular but academically unsound programs. Council does not consider that the funding formula, with its fixed base, averaging and discounts on enrolment change, will lead universities to undertake excessive measures to attract students. Provided all can compete on approximately the same basis, and provided standards are not eroded, it is hard to imagine how competition can be viewed as a major threat to the system. In the final analysis the healthiest and highest quality programs will continue to be those which undertake ongoing self-analysis and constant improvement, and competition, be it for students or funding, is a significant motivating factor in this process.

At the same time, it is important to remember that enrolment is unlikely to decline evenly across the system. Unless some institutions are able to moderate their enrolment declines and eventually stabilize Arts and Science enrolments, they will soon find themselves in very serious circumstances. Those institutions, on the other hand, which currently enjoy high levels of student demand, and those with professional programs, are probably not going to be as concerned with falling undergraduate Arts and Science enrolments because the rate of overall undergraduate decline will be dampened.

What then, if anything, should be done about declining undergraduate Arts and Science enrolment?

The setting in which Ontario's universities must come to grips with this problem is one characterized by a relatively "free market" situation with respect to the distribution of students among institutions and by a mechanism for allocating Government grants among the institutions which reflects enrolment levels but is highly desensitized to sudden changes in institutional enrolment levels. For its part, Council would not be inclined to tamper with either of these characteristics for a variety of reasons.

The Operating Grants Formula with respect to undergraduate programs provides a very important element of public accountability through linking levels of support to levels of enrolment. At the same time, Council designed this allocative mechanism to provide the institutions with considerable fiscal protection against sudden enrolment declines. The stabilization feature of the formula is such that even if an institution's enrolment went to zero, funding based on 50% of its

average enrolment in 1974-75, 1975-76 and 1976-77 would be guaranteed. Despite this protection, there remains the possibility that institutions might be able to convince Government to provide special "bail-out" funding in the event of a drastic enrolment decline. Council has grave concern about the effects that an action of this sort would have on the will of other institutions to cope with the difficult circumstances that will confront all in the coming years.

Council believes that retaining the relatively free "marketplace" with respect to the distribution of undergraduate Arts and Science students among institutions has a good deal of basic appeal. In the first place, it respects the Ontario tradition of institutional autonomy. Secondly, in a situation of overall enrolment decline this approach might well hasten the advent of institutional differentiation along lines of program specialization.

During the Spring, 1978 hearings Council found that the concept of planning appropriate undergraduate Arts and Science enrolment levels was favoured in some quarters. Council, for its part, would question the desirability of such a policy. In the first place, regardless of who would be given the responsibility for the setting of institutional targets, the question of how would have to be addressed.

It must be remembered that enrolment projections at the system level in Ontario, even those made for one year into the future, have been notoriously inaccurate. If quotas for each institution were to be rigidly stated, and if the system enrolment expectations turned out to be too low, there would be a real danger that qualified students might be denied entry to undergraduate Arts and Science programs.

Setting institutional enrolment quotas would also potentially violate Ontario's tradition of free student choice, and in turn might well exacerbate the enrolment decline situation. For example, if a student were unable to enrol in the institution and program of his choice, he or she might decide against attending university.

Council now turns its attention to ways in which excess system capacity for undergraduate Arts and Science students might be reduced to reflect more closely the expected levels of student demand. The options considered must respect the probability that the Government will wish to ensure that all universities in Ontario continue to offer some services. In this context it must be remembered that at the local level universities have a special social impact. They have become important to their adjacent communities, particularly in smaller centres, for a variety of reasons. Universities are labour-intensive, and as a result offer a community employment possibilities and consumer spending. University purchases also stimulate the local economy. A university provides status and prestige to a community and, as well, expands the cultural activities available to its citizens. Finally, universities in smaller centres and in Northern areas improve accessibility for students in the region generally, and in some instances, for students living nearby who wish to, or must live at home. Because these considerations are "community specific", they tend to lead many to believe that an area-based legislature will not close any university. Accordingly, institutional closure is very likely an unrealistic solution to the enrolment problem.

This suggests three options which might be adopted. The first would reduce system capacity for undergraduate Arts and Science students through satellite campus rationalization. The second would involve the merger of undergraduate programs at adjacent institutions. The final option would call for differentiation of undergraduate roles and offerings.

Council realizes that these options are not the only ones available, nor are they considered to be mutually exclusive. Rather, they are examined as ways, taken singly or in combination, of addressing a university system problem. Each option has direct implications for institutional autonomy and system control structures which are addressed in a later section of this paper.

Satellite Campus Rationalization: The first approach involves closing or modifying the functions of a small number of campuses without threatening the existence of the parent university, and without eliminating university level educational opportunities for the region served by the particular campus in question.

Regarding satellite campus closure, examples which immediately come to mind are the University of Toronto's undergraduate campuses at Scarborough and Erindale, and York University's Glendon College. If system rationalization is needed at the undergraduate level to reflect decreased student demand, is it appropriate to have five 4-year undergraduate Arts and Science campuses in Metropolitan Toronto? Could some, or all, of the satellite campuses be closed without jeopardizing the parent institutions? If closure is not the answer, could the functions of these campuses be modified

to assist in the system's need for reduced undergraduate capacity?

Council also sees a need to ensure that, at the undergraduate Arts and Science level, care be taken to avoid further build-up of fixed instructional resources (particularly tenured faculty) that could soon represent a serious element of excess capacity in the system. This could involve reorganization of an institution with multiple affiliated institutions to enhance flexibility for responding to changing demands without adding to overall physical or faculty capacity. For example, Laurentian and its affiliated university colleges might be integrated into a University of Northeastern Ontario, with four, or even more, campuses to serve the needs of the region. Faculty would be assigned, and programs offered, on a pro-tem basis in response to local needs. In this way the satellite campuses, and off-campus operations, could continue to provide the same, or better, educational opportunities for the region that the affiliates now serve, but the institution as a whole would have more flexibility to respond to changes in student demand. This type of approach would not necessarily reduce the costs of providing university education in Northeastern Ontario. However, it would be in keeping with other efforts to rationalize the system and might well avoid future problems of regional excess capacity or program proliferation should the affiliates continue to develop along individual institutional lines.

Merging Undergraduate Arts and Science Programs: At geographically proximate institutions, one could visualize a situation where, if enrolment declined sufficiently, only the mass of a combined student body would be adequate to allow maintenance of a broad spectrum of program offerings. Council has already heard the views of Waterloo

and Wilfrid Laurier, Carleton and Ottawa on the subject of merger, but nonetheless finds the concept of undergraduate program merger of continuing interest.

Institutional Role Differentiation at the Undergraduate Level: Council believes that, generally speaking, undergraduate role differentiation must be considered in the broader context of institutional role differentiation, and has turned its attention to this question in a later section of this paper. Nonetheless it is appropriate at this juncture to raise one option for differentiation that is specific to undergraduate programs, namely, elimination of high cost honours programs in areas of specialization where demand declines. Council would be most interested in hearing institutional views on this option, and the cost savings that might result. As well, would independent institutional action along these lines necessitate increased involvement of the collectivity in the undergraduate area to ensure that in the system as a whole there would remain adequate coverage of specializations in four-year undergraduate programs?

Finally, in order to put the above discussion in proper perspective, we must keep in mind the objectives of Arts and Science undergraduate education. As in all other sectors of post-secondary education in Ontario, the prime objective is the provision of high quality education. In Arts and Science, the prime objective is specifically the provision of high quality general education. Before the decline began in 1977-78, Arts and Science experienced a large increase in enrolment. There are two possible reasons for this: (i) there were many people who wanted a general education; and (ii) many people thought it would lead to a good job. With respect to (i), Council believes Arts and Science education has served that

purpose. However, regarding (ii), an Arts and Science education is not the road to riches for many. The universities must make it quite clear, especially at this time when they are attempting to cope with large declines in Arts and Science enrolment, that the primary purpose of an Arts and Science education is to provide a high quality general education, and not specific job training.

In the foregoing pages, Council has addressed, rather specifically, the problems of declining undergraduate enrolment and possible ways of coping with this decline. It now invites institutional responses to the issues and questions raised.

For its part Council is of the opinion that institutions should be left to adjust their operations to bring them into line with changes in demand for their services, and should be able to live within the resources provided through the current allocative mechanisms even in the event of severe enrolment drops. (Despite the problems associated with likely enrolment declines and funding levels, the universities should be able to achieve the undergraduate goals of developing a more educated populace and educating and training people for the professions. Furthermore, provided the institutions are able to find the correct solutions to their problems, the quality of undergraduate programs in Ontario will be maintained.

GRADUATE INSTRUCTION

The graduate sector of the Ontario university system differs from other areas of university affairs in that its evolution has been characterized by a degree of control not found elsewhere. It has always been believed that graduate education is so important and so costly a venture that it has required this careful planning and coordination. Each year Council has issued an advisory memorandum on graduate planning. In addition, graduate program planning has proved to be an important subject of discussion during the annual meetings of Council, the individual universities and the Council of Ontario Universities (COU).

Therefore, even though the problems of declining enrolment and constrained funding which now face the graduate sector are the same as those which are being experienced in all other sectors, the solutions cannot be sought in the same way. In order to understand fully the situation and to determine ways of coping with it, one must be aware of the way in which the graduate enterprise has developed. For this reason, Council presents a summary of the evolution of the graduate sector up to this point before addressing the problems of the immediate future.

Historical Background

In the early 1960's existing institutions were expanded and new ones created in response to rapidly increasing needs and demands of society. The graduate sector, responding quickly to both the growing need for post-secondary educators and the pressure to expand research in Canada, was far from exempt from this tremendous growth and in fact surpassed the rate of growth of the undergraduate sector. It must be

understood, however, that graduate studies began its enrolment growth from a disproportionately low base. Thus the increase in numbers of graduate students that was achieved in the growth years was not out of line with the increases at the undergraduate level. Indeed, growth in graduate studies was strongly supported by government, as was shown by the introduction of a system of Extended Graduate Program grants to help universities cope with the expansion. Also, the Province of Ontario Graduate Fellowship Program was introduced to aid graduate students who wished to pursue a career in post-secondary teaching. Although the government encouraged and financially supported this expansion, it did not interfere with the actual process. The responsibility for the careful planning of new programs of high quality was left to the universities. University autonomy, which has always been a basic characteristic of the Ontario university system, was respected.

By the mid-1960's there was growing concern over the pattern of development in the graduate sector. In 1965 a commission was appointed to study this development, and in 1966 the Report of the Committee to Study the Development of Graduate Programs in Ontario (Spinks Report) was published. Perhaps the most well-known recommendation contained in the report was that the University of Ontario should be formed. However, because of the value attached to maintaining the distinctive personalities of Ontario's universities, this recommendation found little support. The report did, however, contain many other recommendations of a less extreme nature. In some respects, the Spinks Report can be viewed as somewhat of a turning point in the development of graduate studies in Ontario. Until the time of publication of the report, the responsibility for the development of graduate programs was in the hands of the individual universities. After 1966, however, there began a move towards system-wide cooperation and coordinated graduate planning.

The first step in the evolution of cooperative graduate program planning was the introduction of the appraisals system. The main goal of the appraisals system was the assurance of academic quality. The Committee on University Affairs (CUA) strongly supported the appraisals process, as is evidenced by the following excerpt from its 1967 report.

This system provides the first and perhaps most critical test for a graduate program - academic quality. The structure of the system and the use of external judges seems to provide for the utmost objectivity and fairness. ⁽¹⁾

However, although CUA supported the appraisals process, it felt that a satisfactory appraisal in itself was not sufficient for the approval of new programs.

Appraisal is a necessary step in determining the feasibility of inaugurating a new graduate program, but it is not a sufficient criterion. Tests of need must also be applied. ⁽²⁾

In this report the Committee also spoke of "effective rationalization of effort and resource allocation" and "more effective communication among the universities and with the Committee on University Affairs."

Even at that time of prosperity for the universities, the questions of academic quality, need, prevention of duplication, and cooperation were being addressed. While recognizing that these were important aspects of graduate planning, the Committee cautioned against the possible threat that too much control might pose to the system and to the principle of autonomy.

(1) Report of the Committee on University Affairs 1967, p.24

(2) Report of the Committee on University Affairs 1967, p.25

In encouraging the development of graduate work in Ontario it is imperative that programs of such cost and importance be of high quality and carefully planned. Rapid but controlled growth, reasonable enough as a concept, presents certain challenges to traditional patterns of interaction and to fundamental notions of university autonomy.⁽¹⁾

The next major stage in the evolution of coordinated, system-wide graduate planning was the formation of discipline groups which were concerned with graduate planning by discipline across the system, rather than for each university separately. In 1968 the Advisory Committee on Academic Planning (ACAP) was created. ACAP was given the task of advising and aiding in the development of these discipline groups. A concise description of the development of discipline groups and ACAP can be found in Advisory Memorandum 75-IV.⁽²⁾ It is important to note here, however, that since their initiation they have come to play important roles in the development of the graduate program planning process in Ontario.

During the growth period much concern was expressed over the rapidly rising cost of the expansion. For this reason, in 1971 the Ontario Government placed an embargo on funding of all new graduate programs. This embargo was later modified to include only those disciplines which were felt to be in danger of over-expanding. ACAP was given the responsibility for the planning studies to be done in the embargoed disciplines.

By 1975, much concern was being expressed over the enrolment sensitivity of the graduate funding formula. It was felt by many that a funding formula which was less enrolment-sensitive would be

(1) Report of the Committee on University Affairs 1967, p.23

(2) Ontario Council on University Affairs, Second Annual Report 1975-76, p.26

more appropriate in the graduate area. In view of the importance of the graduate funding mechanism, Council invited the universities, during the 1975 Spring hearings, to offer their views on how the formula might be revised. Council also recognized that any formula revision of this kind would require careful consideration of all aspects of graduate work in Ontario. Accordingly, in Advisory Memorandum 75-V,⁽¹⁾ Council recommended to the Minister that the graduate funding formula be suspended for 1976-77 and 1977-78. This recommendation was later modified to include 1978-79. This "freeze", as it came to be known, served the dual purpose of affording Council the time in which to make a thorough examination of graduate funding, and providing the universities with the opportunity to assess their priorities and plan graduate work, both at the institutional and the system-wide level, without the financial pressures of an enrolment-sensitive funding mechanism.

While the period of formula suspension has provided both Council and the universities with the opportunities outlined above, it has also come to play an even more important role in the evolution of the graduate sector in Ontario. During the freeze two very important developments have taken place: the reformulation of the appraisals process by COU, and the determination, by OCUA, of the approach to be taken to graduate planning in the first quinquennium, 1979-80 to 1983-84.

In 1977, COU presented newly revised by-laws pertaining to the graduate planning/appraisals process. These modifications place a

(1) Ontario Council on University Affairs, Second Annual Report 1975-76, p.34

much greater emphasis on quality than had previously existed in the planning process, and above all, ensure that all existing graduate programs in all disciplines will be subjected to rigorous quality appraisals. These revisions have been approved of and supported by Council. As yet, however, no discipline reviews have been completed under the new procedures. Council is anxiously awaiting the results of the implementation of the new procedures.

The abovementioned planning/appraisals modifications apply mainly to existing graduate programs. With respect to new programs, Council, in Advisory Memorandum 77-VII⁽¹⁾, developed strict criteria for their approval. These criteria have been developed in accordance with the goals Council has established for the graduate sector for the first quinquennium, 1979-80 to 1983-84. It is not Council's intention to reiterate these objectives and criteria here, but rather to stress that they are based primarily on the aspects of quality and need, which are so important in graduate education.

The Future

The situation facing the university system as it enters the first quinquennium is one which creates much cause for concern. As can be seen in the tables in Appendix III-2 graduate enrolment is in decline, and this decline is expected to continue. Continuing enrolment decline, when combined with the constrained funding which is being experienced by all sectors of the university system, leads Council to ask a fundamental question: will the controls now in existence be sufficient to ensure the maintenance of a high quality graduate enterprise in Ontario? At present the Council does not know whether the new planning/appraisals

(1) Ontario Council on University Affairs, Fourth Annual Report 1977-78, p.55

processes will be rigorous enough to eliminate all of the existing graduate programs which are of less than good quality. Nor can Council be sure that COU will adopt a stricter stand than heretofore regarding the funding of new graduate programs in line with the funding criteria established in Advisory Memorandum 77-VII. Council is, however, in the process of formulating new funding allocation mechanisms which are geared to promoting system-wide stability in the face of declining enrolment.

Council will continue to watch with great interest the progress of graduate planning in Ontario and hopes that the new procedures regarding both existing and proposed graduate programs will be sufficient to ensure the continued development of a high quality graduate enterprise. The maintenance of high quality graduate programs and the elimination of poor quality programs has always been a prime objective of the university system. Now, more than ever, it is absolutely essential that this objective be realized through the agencies of COU and ACAP and using the criteria and objectives iterated by Council. Council is committed to awaiting the outcome of the control procedures before taking further action but would not hesitate to introduce further controls, should there be any indication that they are necessary.

Council does not believe that the situation in the graduate sector at present stands in the way of achieving the university system's goals. However, questions of control and planning mechanisms aside, Council is concerned that graduate rationalization and disciplinary evolution have

been considered in isolation. Council believes that future rationalization and planned evolution must take into account the interaction between the graduate and undergraduate sectors and the institutional profiles which thus emerge. Accordingly, Council now turns its attention to the subject of rationalization through institutional role differentiation.

INSTITUTIONAL ROLE DIFFERENTIATION

The concept of institutional role differentiation in the Ontario university system is one that has been cited often, in recent years, as a desirable aim. With a future of falling demand for university level instruction combined with fiscal stringency, the attractiveness of institutional role differentiation is likely to grow, at least from the perspectives of the public and the government, as a way in which system resource commitments might be brought into line with student demand levels through elimination of duplication and through consolidation.

From its own perspective Council believes that considerable institutional differentiation already exists in Ontario. This is due in part to the way in which the universities evolved, and in part to the regulatory processes that have had a bearing on new program initiatives during the past decade. The current differentiation among institutions in Ontario occurs through a combination of disciplinary emphasis and breadth of instructional offerings. Some universities are known for particular disciplinary strengths, some for the breadth of professional schools and some for their regional or other character. Of course, there is duplication of programs in the system. To some extent this is necessitated by the nature of a university and the way in which Ontario's universities evolved as independent institutions. Council's concerns with unnecessary duplication at the graduate level have led it to encourage the system to examine and

begin to resolve this problem during the first graduate planning quinquennium. Moreover, Council believes that there remains some scope for increased role differentiation among the universities based on disciplinary emphasis and level and range of instructional offerings. Without prejudging which institutions might fall into each, Council suggests the following four categories:

1. Institutions oriented primarily toward undergraduate Arts and Science, with few, if any, undergraduate professional programs and no graduate programs.
2. Institutions oriented primarily toward undergraduate Arts and Science and selected undergraduate professional programs. Institutions falling into this category might have, as well, limited offerings at the master's level to meet specific regional needs and opportunities.
3. Institutions which offer a broad range of programs at the undergraduate and master's levels, including professional programs, with doctoral programs in fields restricted to the institution's particular strengths in one or two graduate sectors.
4. Institutions which offer a broad range of programs at all levels of instruction. Programs at the graduate level would likely be offered in each of the four general graduate divisions, but not necessarily in all disciplines.

Council will be interested in hearing from the universities the extent to which further role differentiation along the lines suggested might be a feasible and appropriate solution to the system's dual problems of enrolment decline and fiscal stringency. For its own part Council does indeed feel that movement in these directions would assist in the effective utilization of public funds through elimination of areas of unnecessary duplication. Because the foregoing discussion has been motivated by considerations of declining enrolment and stringent funding, institutional role differentiation is examined solely in the context of instructional offerings. In responding to Council's thoughts on this subject the universities should elaborate upon the extent to which the research and

public service functions would be influenced by institutional role differentiation along instructional program lines.

Any consideration of institutional role differentiation immediately generates a host of questions: Can effective differentiation be achieved through independent institutional decision-making? If not, who should determine each institution's role in the system and through what means? Questions of this nature in turn raise fundamental questions of control mechanisms and structures, university autonomy and public accountability, all of which are discussed in Part IV of this paper.

RESEARCH

As stated in an early section of this paper, research is a vital function of the university. In Canada, research in the universities has been supported by both the federal and provincial governments. The federal support has been provided primarily through the national granting agencies, the National Research Council, the Medical Research Council and Canada Council. Using NRC as an example, it is clear that two features of that agency's policy have been essential to the maintenance of quality and the level of research in Canadian universities. First, NRC has provided the necessary mechanism for peer judgment of research. The funds have gone to competent researchers and meritorious projects regardless of which university housed the project. An important product of the policy is that universities have been assisted in identifying their strengths, and centres of international reputation have emerged. Second, some funds have been provided to all universities in the form of special grants because NRC recognized the need for research at every institution.

Provincial support for research has been provided through the normal operating grants and as operating grants have increased, so has the funding for research. For example, the number of full-time faculty increased substantially over the last 20 years and faculty members are normally paid both to teach and to do research. Also, the Government of Ontario has supported research in the universities through direct grants or contracts. The Ministry of Agriculture and Food contract with the University of Guelph is an example of such an arrangement which appears to be beneficial to both parties. Research funds also come to the universities from foundations and through the proceeds of lotteries, as well as other assorted avenues.

Although the level of research activity in the universities and in Canada generally has increased in the past 20 years, it is still significantly below the level of most industrialized countries. At present, the total Canadian expenditure for research and development is equal to 0.9% of the gross domestic product (G.D.P.) as compared with 2.3% for Holland and Germany and 2.5% for the U.S.A. The industrial sector accounts for one-third of our expenditure on research and development while the remaining two-thirds is spent by governments and the universities.

The promotion of research has been a difficult task in Canada. The national granting agencies have been sympathetic and supportive of research in the universities and governments themselves have conducted a significant amount of research. On the industrial front, however, there has been little incentive for Canadian companies to be actively involved in research and development. Some have built up research programs of a substantial nature but others have been content to import their technology from elsewhere. In Canada, unlike the situation in many developed countries, industry has made only limited use of the research capacity of the universities.

The need for research in a country trying to promote industrial growth appears to be obvious and yet no national priority has been given to research until very recently. It is difficult to understand the past Canadian attitude as far as applied research and development is concerned. It is not as difficult to understand our restricted funding for basic research because in some minds it is thought to be not very useful. There is no immediate impact from basic research but over a period of years it shapes our thinking about technology, our environment and our culture. Information obtained yesterday fits with new information gained today and the pyramid of knowledge grows

step by step. The accumulated new knowledge and new techniques become the basis upon which industry and culture develop.

The rather sad state of research in Canada today has apparently been recognized at long last by the Government of Canada. It is clear from the initiatives proposed by the Ministry of State for Science and Technology (MOSST) that an attempt is being made to increase the amount of research done in Canadian industry, to increase collaborative efforts between universities and industry and to encourage research on matters of national priority. Included among the initiatives proposed,⁽¹⁾ of particular interest to the universities, were:

- (a) a national target for research and development expenditures of 1.5% of G.D.P. by 1983 (but with unstated manpower implications);
- (b) a \$3 million program under Canada Works to create jobs for scientific and technical personnel to undertake research projects in universities at the request of Canadian firms;
- (c) establishment, over the next two years, of up to 5 regional university-based Industrial Research and Innovation Centres (IRIC) with \$2 million being made available this year;
- (d) creation of Centres of Excellence on a regional basis to achieve better integration of government, university and industrial research capacity that will be based on the natural and human resources of each area; and,
- (e) an increase of \$10 million this year in the budgets of the granting councils for university research in areas of national concern.

(1) "Research and Development in Canada: A Discussion Paper", Ministry of State for Science and Technology, June 1, 1978

The measures listed above, taken in addition to the incentives contained in the last Government of Canada budget, should stimulate research in the universities. It is hoped that the universities will be responsive to the government proposals involving joint research efforts with industry. Several universities already appear to have begun to develop closer ties with industry and the funds provided by government should be an added stimulus. Also, increased funding for research proposals on subjects of national priority should be welcomed by the universities since they responded very favourably last year to the NRC initiatives in this area.

The Current Concern

Why is Council concerned about the level of research support in Canada? To understand the problem fully, it is necessary to look at the situation that prompted the June 1 announcements by MOSST. Industrial research is low in comparison to other countries. In addition, the gains made in promoting university research in the 1960's have been seriously eroded due to inflation in the 1970's. What does the future hold?

The figures shown in Part II of this paper give some measure of the possible consequences for the universities of restricted funding. The universities will likely be forced to reduce faculty and staff complement to live within their income. As unpleasant as that will be to the university community, an even more serious consequence may be that very few new scientists and researchers will be able to find positions

in universities or elsewhere. Most of the faculty members of the universities and the scientists of research establishments in government and industry are below 45 years of age with years ahead of them before normal retirement. Because of the skewed age distribution and because of restricted funding for research in general and the universities in particular, Canada faces the serious problem of having a whole generation of scientists with no place to use their talents. In the long run this situation could deter young people from entering graduate school and embarking upon careers in research. Canada could end up with one generation of scholars with no positions and the next generation of students with no interest in research because they perceived no employment opportunities. Naturally enough, the universities would like to be able to hire young people to stimulate research and maintain scholarship. Indeed, the availability of some new blood each year is essential to the good health of the universities. However, the availability of researchers to the universities is only part of the real concern, namely that well-qualified research persons should be given opportunities somewhere in Canada because the country needs the emphasis on research.

It is essential that the research force in Canada be maintained and strengthened. There will be a critical need for renewal as the current researchers grow older. New manpower must be brought into the system through whatever initiatives are necessary.

The important question at this time is whether in the opinion of the universities the new federal research initiatives are enough to alleviate their problems. If, through the increase in grants to the

federal granting agencies and the industry-university schemes, the universities are able to hire enough young people in research positions one of Council's main concerns about the future will be removed. Council believes that collectively and individually the universities should be analyzing the new proposals of the Government of Canada in terms of how many research positions will be available in conjunction with the increased funding. If the number is small, the universities might consider asking the federal granting councils to seek funds for several hundred five-year research career awards to be granted competitively. The recipients could be free to choose a Canadian university or other research establishment as long as the area of research was one designated as a national priority.

As far as provincial support for research is concerned, it is clear from recent statements by the Premier of Ontario that the government is aware of the importance of research to a province whose economy is industrially based. Therefore, the possibility of further provincial initiatives in this area should not be discounted. Research could be stimulated in Ontario by several mechanisms including tax concessions to industry or by the establishment of a special industrial research fund by the province. Such a fund might be used to support projects which have been submitted jointly by industry and one or more universities. The projects themselves should, of course, be of direct importance to the industrial base of Ontario.

From the foregoing, it will be clear that Council has serious concerns about the future of research in the universities and in Canada as a whole. The results of the new federal government initiatives should be monitored very closely over the next two or three years. If the research targets are not being reached, governments should have no hesitation in taking

further steps to ensure a satisfactory research effort. As far as the universities are concerned, Council is interested in hearing from them about the adequacy and the implications of the special measures proposed by MOSST. Are the universities prepared to accept the new role that is envisioned and can they accommodate to the implied shift towards more applied and less basic research?

On a final note, Council states its opinion that new funding from whatever source should not be used to promote graduate studies but to provide research associates and technicians. The graduate instructional enterprise does not need significant expansion at this time. The number of research positions must be increased so that persons who do graduate can contribute to the increased research effort so vital to the future of the country.

A university system without a high level of research cannot possibly fulfill its mandate to the public. However, as with the other academic functions of universities, it does not follow that all should be involved in research to the same extent. Despite the importance of promoting research in all universities, a measure of priority should also be given to the development of major research centres in universities with existing research strengths in the appropriate subjects.

PART IV:

AUTONOMY AND CONTROL - STRUCTURAL ALTERNATIVES

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AUTONOMY AND CONTROL: STRUCTURAL ALTERNATIVES

During its 1978 hearings with the university community, Council was impressed, as never before, with the opposing views held by the institutions and provincial organizations alike concerning the appropriate roles and potential effectiveness of OCUA, the Council of Ontario Universities (COU), and COU's affiliates such as the Advisory Committee on Academic Planning and the Ontario Council on Graduate Studies. As well, opinions varied widely on the subject of the general policy development and approval mechanisms that have evolved in the Ontario university sector. Indirectly, responses of the institutions and provincial organizations to the specific questions and issues raised in this paper will provide commentary on the appropriateness of the structures which govern university affairs in Ontario.

An important characteristic of Ontario's universities is that most began as private institutions. Despite their having become predominantly dependent upon Government for financial support, the universities have not lost their individual traditions and characters, and have maintained very important links with the private sector. These links are vital to the health of our universities and our society. Individual and private giving permits the universities to offer a level of service that would be impossible without this source of revenue. Equally important are the special relationships that exist between the institutions and their local communities. Strong community involvement in the universities and

equally strong university involvement in the local community are vital if the university is to retain relevance to the society it serves.

In terms of their degree of independence, the institutions currently fall somewhere between full autonomy and total Government control. Council's purpose, in this section, is to bring to the fore issues related to the structure and the policy-setting processes as these affect the degree of independence enjoyed by Ontario's universities. However, to deviate momentarily for illustrative purposes, Council would point out that there are already a number of areas where a university's statutory independence to act is severely curtailed. An example with significance to the immediate fiscal future of the institutions concerns tuition fees. In effect, the determination of tuition fee levels has become a process in which these fees are treated as if they were a form of Provincial Government revenue: in recent years the Government has, de facto, set university tuition fees. This type of "lost" autonomy lies outside the realm of control structures which are discussed in this paper. Nonetheless, Council is aware of the extent to which controls of this nature are being imposed on the universities.

Council believes that it is important for all concerned to keep a watching brief on the extent to which a balance is maintained between public accountability and institutional autonomy. As well, Council has a particular interest in assessing the value of its current role, and how this might be adapted in response to current problems.

What may well be found, through institutional replies to Council's questions, is that current structures and controls at the system level are unnecessary, and that what is indeed needed is less external control and more institutional autonomy - a return of the universities to the private sector. Alternatively, there may be indications of a desire for full and direct central administrative and academic control of all institutions - a "University of Ontario" model. To Council it is obvious that the long history of continuity and gradual change in Ontario make it extremely unlikely that the structure and control of university affairs could undergo significant or rapid change. Hence Council now turns its attention to less radical options. Falling between the two examples mentioned above there are at least four, more moderate, structural arrangements: the current model; the current structure with OCUA discontinued; the current structure with a somewhat different role for OCUA involving limited executive authority; and, finally, replacement of OCUA with a university grants commission.

The Current Structure

As mentioned earlier, the Ontario system has a rather singular arrangement at the government/university interface. The universities have virtually total autonomy in the area of academic affairs and are fully responsible for internal fiscal management. At the same time the institutions are almost totally dependent upon the Government for their operating finances. Public accountability for the significant level of support given to the universities is ensured through the allocative formula used to distribute funds and the procedures in place to regulate which programs shall be eligible for funding. Council sits, as a buffer body, between the institutions and the Government. Its role is manifold -

developing and advising the Government on general policy issues as well as specific matters, promoting liaison, and at the same time keeping some distance, between Government and the universities, and maintaining a public interest overview of developments in Ontario universities.

A feature of the current arrangement is that through the presence of OCUA, and its advisory involvement in the policy development area, Government's decisions with respect to the university system are considerably more public than might otherwise be the case. In giving its advice, OCUA spells out fully the rationale underlying its conclusions and, if Government rejects Council's advice, reasons are usually given for the decision. Also, the current structure has appeal in that it has the flexibility to adapt, albeit gradually, to changes in the environment. For example, even in its brief life-span OCUA has taken on a considerably more interventionist role than that with which it began, and now has even gone so far as to set system objectives and the rules to be followed by institutions in achieving system goals.

On the other hand, the current structure might well be criticized on at least three grounds. First, the degree of autonomy enjoyed by the institutions might be seen in some quarters as a roadblock to effective and speedy system rationalization. Many believe that a great deal of rationalization is required in the system and that this indicates a need for a strong central authority to institute planned system-wide changes. Second, there is always the danger that Council's advice might not be sought on matters of precedence-setting importance. Third, and finally,

because the structure is somewhat relaxed and because OCUA lacks executive authority, institutions may still approach Government directly for their own benefit. Government's response to direct requests might potentially be contrary to whatever advice OCUA might give in light of system-wide considerations.

Before proceeding to examine other structures which might be proposed for Ontario, Council would request responses to this analysis of the current arrangement. In particular, Council would like to know whether the university community and Government feel that the current structure can be maintained and at the same time hasten and improve changes directed toward effective system rationalization. What should be the functions of a buffer which lacks executive authority? OCUA is tending, more and more, toward active involvement in the decision-making process as evidenced by its new role in the graduate program funding approval process. Has this been desirable? Are there other areas in which OCUA should increase its activities without actually taking on executive authority?

Abolishing the Intermediary Body

There is, of course, always the option of discontinuing OCUA and leaving the institutions to deal directly with Government. In itself, this option would not necessarily alter the current degree of institutional autonomy or the latitude present in the system for local initiative and timely responses to local demands. To the extent that OCUA provides a credible element of unbiased input to the decision-making process and assists in making the rationale for Government decisions more public, discontinuation of OCUA might jeopardize these features. Nonetheless, some institutions might feel that Government responses would be accelerated in the absence of an intermediary body and that their individual interests would be better served by approaching Government directly with requests.

To explore this option in the clearest of possible terms, Council poses the following questions. Do the institutions see OCUA as a stumbling block between themselves and Government? In the absence of an intermediary body like Council, how would the decision-making process take account of the public interest and system needs? How would the interests of the public and the system be protected against the effects of special political pleading? Would system rationalization be more rapid and effective if handled directly by the Ministry of Colleges and Universities? Would more direct Government involvement in university affairs threaten institutional autonomy?

Limited Executive Authority for the Intermediary

This alternative and the next are put forward in response to criticism, received during Council's 1978 hearings, that the Ontario university system lacks leadership. If this criticism is well-founded, it implies that COU, because it is a voluntary association of institutions with differing vested interests, has severely limited effectiveness. For example, the collectivity is currently responsible for disciplinary planning of programs at the graduate level. If it is generally felt to be true that the system lacks leadership, it might, then, be construed that effective leadership should reside with OCUA, since OCUA might be able to be more decisive, particularly with respect to issues involving rationalization.

This option, then, posits a structure in which OCUA would be given limited executive authority for such specific matters as program approval, and would retain its advisory role vis-à-vis Government on major general issues such as total funding, accessibility, and the allocation of funds.

Assessment of the need for programs and other factors of public interest would be conducted entirely by OCUA. The role of COU and its affiliates would be that of ensuring program quality.

Council has the impression that an approach of this type might find favour in some quarters, and hence poses the following, rather blunt, questions: What is the likelihood of Government giving OCUA even limited executive authority? Once given executive authority, could OCUA continue to act as a buffer and advisor with sufficient credibility in the eyes of both Government and the universities? Is the concept of "limited authority" valid - what clout would OCUA need to have to enforce compliance with its plans? Can executive authority for program approval be separated from authority to allocate funds? What impact would an increase in executive authority for OCUA have on institutional autonomy?

University Grants Commission

A university grants commission may take many forms. Its functions and authority may be strictly limited or very extensive. For the purposes at hand, Council sets as the essential difference between the last option and this one, the addition to the intermediary body's mandate of the authority to allocate funds among the institutions.

In practice, a university grants commission of this sort would dilute current institutional autonomy to a considerable extent in that, through specific funding decisions, it would become involved in planning at both the system and institutional levels. It would determine how many, and what type of, programs and students to fund at each institution. It would have advisory capacity in the area of global grant support and other major policy issues over which Government would retain control,

such as financial assistance for students. Institutions would continue to be self-administered in terms of hiring, determining program content, admissions, and the like.

It must be clearly understood that, of the options considered, this represents the most radical departure from the present structure. Again, Council poses what it hopes are the key questions which must be asked if such a departure is contemplated. Would a grants commission model secure system rationalization more effectively than the other options involving an intermediary body? Is the price, in terms of university autonomy, too high? Is it reasonable to expect that any government in Ontario would ever approve this kind of approach given Ontario's history of autonomous institutions? Could a university grants commission retain credibility as an unbiased advisor to Government? In the Ontario context, would it be possible for an intermediary body of this type to retain an arm's length relationship with Government?

In the foregoing, Council has outlined very briefly the advantages and disadvantages of four possible structures at the interface between the university system and Government. It is quite clear that the university community is also exploring this area, and Council will be eager to hear specific responses to the questions it has posed.

EPILOGUE

EPILOGUE

In summary, Council believes that the critical issues now facing the university system involve the level of private and public financial support, the level of student demand for undergraduate, professional and graduate study, the maintenance of an adequate research capability, the rationalization of operations and aspirations in line with the level of service required, and the maintenance or alteration of the current structures of autonomy and control. It is the responsibility of the universities, individually and collectively, to face these issues. In the final analysis, the decisions taken by the institutions will determine the quality of Ontario's university system.

Changing circumstances will not affect the goals for the universities described in Part I of this paper but they may lead the universities to modify their emphases and the way in which they pursue these same basic goals. For example, the goal of developing a more educated populace may become less a matter of large numbers of full-time undergraduate students than has been the case in recent years. The goal of educating and training people for the professions may have to be pursued less indiscriminately than in the past with more attention being given to the relationship between overall university system output and employment prospects for graduates. Providing for study at the highest intellectual level will remain a key goal but may involve fewer graduate students and, indeed, might yield in priority to the system's need for a balanced age distribution among university researchers. Pursuit of the goal of conducting research may well require the universities to become more involved in development and evaluation without jeopardizing their very important basic research role. Finally, the goal of community service

may come to be pursued by the universities through the development of closer ties with the community at large and an even greater volume of direct service to the private sector and to government at all levels.

Council is confident that Ontario's universities will succeed in their ongoing pursuit of the goals for the system and looks forward with great anticipation to its 1979 hearings with the university community at which time the issues and questions raised in this paper will be discussed.

APPENDICES

Sensitivity of Models to Changes in Parameter Values

Some general comments can be made about the sensitivity of these models to changes in the initial values of the parameters. If inflation is assumed to be at an 7% level rather than the initial 6% revenue increases to the university system will be from 0.8% to 1.0% higher than those generated by the models. If Government grants pick up the entire additional 1% inflation in revenue they will be 1.3% higher than at present.

An enrolment decline of 4% per annum will cause an additional 1% decrease in tuition fee revenue. In the case where Government grants are related to enrolment (Model 2), they too will fall. The effect on university revenues can be to have increases up to 1.4% lower than indicated in the base case. Conversely if enrolment falls less than 3%, fee income will be higher and the grants in Model 2 will be higher.

Tuition fee increases provide a means by which university revenues may rise. If tuition fee rates rise by the same percentage as the increase in grants, they may generate up to an additional 1.2% increase in total university revenues per annum.

IMPLICATIONS OF ALTERNATIVE FUNDING MODELSMODEL 1

	<u>1979-80</u>	<u>1980-81</u>	<u>1981-82</u>
1. Benchmark Expenditure (\$ m.) (from Table 5)	1008.1	1085.8	1169.5
2. Revenue (\$ m.) (from Table 2)	907.8	1041.4	1098.1
3. Accumulated shortfall (\$ m.) (Benchmark expenditure less revenue)	20.3	44.4	71.4
4. Illustrative options available to university system to match shortfall:			
(a) accumulated % decrease in faculty and staff salary and benefit expenditures if these absorb the entire shortfall, OR	2.5	5.1	7.5
(b) accumulated % decrease in non-salary expenditures if these absorb the entire shortfall, OR	10.2	21.1	32.0
(c) accumulated % decrease in total operating expenditures if all areas of budget absorb the shortfall equally	2.0	4.1	6.1
5. Accumulated number of <u>faculty</u> positions implied by each option if cuts are made from positions:			
(a)	305	622	915
(b)	0	0	0
(c)	244	500	744
6. Student-faculty ratios implied by each option:			
(a)	15.0	15.0	14.9
(b)	14.7	14.2	13.8
(c)	15.0	14.8	14.7

MODEL 2

	<u>1979-80</u>	<u>1980-81</u>	<u>1981-82</u>
1. Benchmark Expenditure (\$ m.) (from Table 5)	1008.1	1085.8	1169.5
2. Revenue (\$ m.) (from Table 3)	977.3	1020.3	1065.2
3. Accumulated shortfall (\$ m.) (Benchmark expenditure less revenue)	30.8	65.5	104.3
4. Illustrative options available to university system to match shortfall:			
(a) accumulated % decrease in faculty and staff salary and benefit expenditures if these absorb the entire shortfall, OR	3.8	7.5	11.0
(b) accumulated % decrease in non-salary expenditures if these absorb the entire shortfall, OR	15.5	31.1	46.8
(c) accumulated % decrease in total operating expenditures if all areas of budget absorb the shortfall equally	3.1	6.0	8.9
5. Accumulated number of <u>faculty</u> positions implied by each option if cuts are made from positions:			
(a)	464	915	1342
(b)	0	0	0
(c)	378	732	1086
6. Student-faculty ratios implied by each option:			
(a)	15.2	15.4	15.5
(b)	14.7	14.2	13.8
(c)	15.1	15.1	15.1

MODEL 3

	<u>1979-80</u>	<u>1980-81</u>	<u>1981-82</u>
1. Benchmark Expenditure (\$ m.) (from Table 5)	1008.1	1085.8	1169.5
2. Revenue (\$ m.) (from Table 4)	966.4	993.0	1020.9
3. Accumulated shortfall (\$ m.) (Benchmark expenditure less revenue)	41.7	92.8	148.6
4. Illustrative options available to university system to match shortfall:			
(a) accumulated % decrease in faculty and staff salary and benefit expenditures if these absorb the entire shortfall, OR	5.2	10.6	15.7
(b) accumulated % decrease in non-salary expenditures if these absorb the entire shortfall, OR	21.0	44.1	66.6
(c) accumulated % decrease in total operating expenditures if all areas of budget absorb the shortfall equally	4.1	8.5	12.7
5. Accumulated number of <u>faculty</u> positions implied by each option if cuts are made from positions:			
(a)	634	1293	1915
(b)	0	0	0
(c)	500	1037	1549
6. Student-faculty ratios implied by each option:			
(a)	15.5	15.9	16.4
(b)	14.7	14.2	13.8
(c)	15.3	15.5	15.8

TABLE A

TOTAL UNDERGRADUATE ENROLMENT (FFTE's)

	<u>1976-77</u>	<u>1977-78</u>	<u>% Change from 1976-77</u>
Brock	3635.8	3439.4	- 5.4
Carleton	10728.7	9956.9	- 7.2
Guelph	10147.7	10062.2	- 0.8
Lakehead	3469.6	3580.5	3.2
Laurentian	3761.2	3482.0	- 7.4
Algoma	488.9	464.0	- 5.1
Nipissing	641.9	571.5	-11.0
Hearst	132.6	96.5	-27.2
McMaster	10759.6	10457.5	- 2.8
Ottawa	12944.1	12562.2	- 3.0
Queen's	10683.1	10543.1	- 1.3
Toronto	31920.9	30643.6	- 4.0
Trent	2826.4	2813.2	- 0.5
Waterloo	13808.2	13829.8	0.2
Western	18385.4	17814.0	- 3.1
Wilfrid Laurier	4527.0	4441.4	- 1.9
Windsor	9764.1	9089.2	- 6.9
York	16364.4	15446.0	- 5.6
Total	164989.6	159293.0	- 3.5

Note: All tables exclude the Theological Colleges which are funded at 50% of the Provincial Operating Grant level.

TABLE BUNDERGRADUATE ENROLMENT

	<u>Arts/Science</u>		<u>Professional</u>		<u>Other</u>		<u>Total</u>	
	#	%	#	%	#	%	#	%
1975-76	92015.0	62.8	50745.9	34.6	3742.6	2.6	146503.5	100
1976-77	92276.3	62.1	52938.8	35.6	3410.1	2.3	148625.2	100
1977-78	87062.4	60.3	53756.1	37.2	3556.4	2.5	144374.9	100

- NOTE: 1. These figures exclude York because it reports enrolment only as Unspecified Undergraduate and Law.
2. The 1975-76 enrolment figures are FTE enrolment and the 1976-77 and 1977-78 enrolment figures are FFTE enrolment. The 1975-76 and 1976-77 figures are Final Actuals but the 1977-78 figures are those of the December count, including Anticipated Actual Winter Term enrolment.

TABLE CENROLMENT

	<u>1976-77</u>	<u>1977-78</u>	<u>% Change</u>
University FFTE Undergraduates	164989.6	159293.0	- 3.5
Ryerson (FFTE's)	9584.5	10389.1	8.4
OCA (FFTE's)	1603.4	1651.5	3.0
CAAT's (Full-Time Post-Secondary)	58,757	61,094	4.0

TABLE DFIRST YEAR INTAKE OF FULL-TIME UNDERGRADUATES

(FALL)

	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>
Brock	691	805	860	723
Carleton	2386	2510	2625	2436
Guelph	2372	2102	2408	2302
Lakehead	610	615	713	703
Laurentian	732	769	861	719
Algoma	104	104	98	90
Nipissing	103	112	108	71
Hearst	16	12	17	7
McMaster	2820	3102	3001	2831
Ottawa	2261	2026	2059	2188
Queen's	2119	2288	2244	2151
Toronto	7419	7300	7387	7495
Trent	761	844	895	757
Waterloo	3997	3954	3989	3753
Western	4820	4831	4624	4575
Wilfrid Laurier	818	888	955	1001
Windsor	1612	1935	1909	1553
York	3327	3697	3830	3182
	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	36968	37894	38583	36537
(% change)	(2.5)	(1.8)	(-5.3)	

Note: These figures are Freshman Intake only. They do not include first-year intake into Diploma, Non-Degree or Selected Programs.

TABLE ATOTAL GRADUATE (FTE) ENROLMENTFALL & SUMMER

	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>
Brock	59.3	77.0	74.1	60.2
Carleton	889.3	1150.2	1133.3	1089.8
Guelph	608.1	661.0	649.4	593.6
Lakehead	123.1	143.9	158.2	148.1
Laurentian	62.9	68.0	65.9	72.6
Algoma	-	-	-	-
Nipissing	-	-	-	-
Hearst	-	-	-	-
McMaster	1461.6	1451.4	1347.9	1246.7
Ottawa	1921.4	1984.1	2102.3	1907.5
Queen's	1228.5	1225.5	1235.1	1255.9
Toronto	4985.4	5045.2	4901.8	4348.1
Trent	13.5	16.2	21.7	26.4
Waterloo	1242.7	1396.5	1311.7	1135.9
Western	1621.1	1627.2	1614.4	1648.5
Wilfrid Laurier	228.1	253.3	322.7	324.8
Windsor	528.6	595.0	595.5	642.9
York	1393.4	1547.7	1605.3	1456.5
OISE	1565.4	1573.6	1667.0	1683.8
Total	17932.4	18815.8	18806.3	17641.3

TABLE BTOTAL FULL-TIME GRADUATE ENROLMENTFALL

	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>
Brock	56	71	69	56
Carleton	710	926	899	875
Guelph	573	622	611	566
Lakehead	78	95	100	88
Laurentian	41	44	41	42
Algoma	-	-	-	-
Nipissing	-	-	-	-
Hearst	-	-	-	-
McMaster	1262	1239	1155	1064
Ottawa	999	1055	1196	1138
Queen's	998	1002	1050	1025
Toronto	3927	3942	3891	3777
Trent	12	15	19	24
Waterloo	1086	1213	1146	979
Western	1503	1517	1493	1509
Wilfrid Laurier	171	193	249	242
Windsor	417	469	459	510
York	1073	1176	1197	1080
OISE	505	542	546	557
Total	13411	14121	14121	13532

TABLE CTOTAL PART-TIME GRADUATE (FTE) ENROLMENTFALL

	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>
Brock	3.3	6.0	5.1	4.2
Carleton	177.3	221.7	228.3	208.8
Guelph	35.1	39.0	38.4	27.6
Lakehead	21.6	25.5	23.7	27.6
Laurentian	21.9	24.0	24.9	30.6
Algoma	-	-	-	-
Nipissing	-	-	-	-
Hearst	-	-	-	-
McMaster	199.6	212.4	192.9	182.7
Ottawa	581.4	608.1	592.8	515.5
Queen's	135.0	138.0	124.5	129.9
Toronto	596.4	611.7	543.3	552.6
Trent	1.5	1.2	2.7	2.4
Waterloo	148.2	172.5	158.7	150.9
Western	111.6	103.2	113.4	135.0
Wilfrid Laurier	20.1	19.8	34.2	31.8
Windsor	111.6	126.0	136.5	132.9
York	317.4	371.7	408.3	376.5
OISE	474.9	453.6	525.0	550.8
Total	2956.9	3134.4	3152.7	3059.8

TABLE DFULL-TIME GRADUATE ENROLMENTFALL INTAKE - MASTER'S, DIPLOMA & FIRST STAGE DOCTORAL

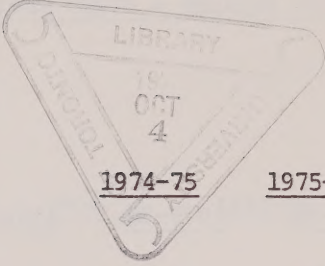
	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>
Brock	15	43	30	26
Carleton	356	473	373	386
Guelph	206	211	198	182
Lakehead	52	76	36	55
Laurentian	25	18	17	28
Algoma	-	-	-	-
Nipissing	-	-	-	-
Hearst	-	-	-	-
McMaster	512	446	391	364
Ottawa	397	393	453	392
Queen's	521	416	446	413
Toronto	1317	1494	1422	1341
Trent	10	6	11	9
Waterloo	351	373	299	255
Western	637	645	632	612
Wilfrid Laurier	101	112	115	93
Windsor	199	235	255	217
York	450	479	476	366
OISE	160	184	181	157
Total	5309	5604	5335	4867

Total Annual
% Change

(5.6)

(-4.2)

(-8.8)

TABLE EFULL-TIME GRADUATE ENROLMENTFALL INTAKE -SECOND STAGE DOCTORAL


	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>
Brock	0	0	0	0
Carleton	40	53	59	40
Guelph	15	20	33	23
Lakehead	0	0	0	0
Laurentian	0	0	0	0
Algoma	-	-	-	-
Nipissing	-	-	-	-
Hearst	-	-	-	-
McMaster	136	91	101	79
Ottawa	66	56	47	55
Queen's	81	94	93	73
Toronto	211	475	414	399
Trent	0	0	0	0
Waterloo	75	76	78	56
Western	117	116	102	81
Wilfrid Laurier	0	0	0	0
Windsor	34	42	41	11
York	91	130	42	29
OISE	101	87	104	90
Total	967	1240	1114	936

Total Annual
% Change

(28.2)

(-10.2)

(-16.0)

